



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 7 9 2011

REPLY TO THE ATTENTION OF:

Ed Bakowski
Bureau of Air
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Dear Mr. Bakowski,

On October 17, 2011, the U.S. Environmental Protection Agency received notification of the Illinois Environmental Protection Agency's (IEPA) intent to issue a Prevention of Significant Determination (PSD) construction permit for Christian County Generation LLC, located in Taylorville, Illinois. The permit application, number 05040027, is for the proposed construction of an Integrated Gasification Combined Cycle facility that will produce substitute natural gas and electricity. The proposed Taylorville facility will be a PSD major source for potential emissions of carbon monoxide (CO), volatile organic compounds (VOC), sulfur dioxide (SO₂), nitrogen oxides (NO_x), particulate matter (PM) and particulate matter at 10 and 2.5 microns diameter, and greenhouse gases (GHG).

Based on our review of the draft PSD permit, we have the following comments. We provide these comments to help ensure that the project meets federal Clean Air Act requirements, that the permit will provide necessary information so that the basis for the permit decision is transparent and readily accessible to the public, and that the permit record provides adequate support for the decision.

1. Page 30 of the draft permit's Project Summary document states that the limiting factor for the application of carbon capture and sequestration (CCS) for reducing GHG emissions from this project is the availability of a pipeline or geologic formation to use for permanent sequestration of captured carbon dioxide (CO₂) emissions. However, we note that Christian County Generation LLC recently applied for permits to construct and operate two Class VI injection wells at the Taylorville site for the purpose of geologic sequestration of CO₂ (see <http://www.epa.gov/r5water/uic/tec/index.htm>). Please clarify or correct this inconsistency in the Project Summary document. EPA generally considers CCS to be an available control technology for large CO₂-emitting facilities, such as fossil fuel-fired power plants and certain industrial plants with high purity CO₂ streams. As such, if IEPA cannot demonstrate why CCS is technically infeasible for the proposed facility, then please revise the Best Available Control Technology (BACT) analysis to evaluate costs and other impacts of installing and operating a CCS system.

2. On Pages 15, 42, and 66, the draft permit states, "The emissions of SO₂, NO_x, CO, VOM, PM, and CO₂equivalent shall not exceed the annual limits in Condition 4.1.6(b), effective one year after the shakedown of the gasification block is complete." Also, Page 24 of the draft permit states that the GHG BACT emissions limit does not take effect until one year after the shakedown of the gasification block is complete. The GHG BACT emission limits for the sulfur recovery unit, coal dryer, and several other emission units have the same permit language.

It is unclear from the draft permit documents why the source is allowed an additional year beyond the initial shakedown period to comply with the BACT emission limits. Furthermore, BACT must apply at all times, including the initial shakedown period, so the permit should contain a BACT limit applicable during the initial shakedown period. If IEPA has determined that compliance with the BACT emission limitations is infeasible during the initial shakedown period, you may establish secondary BACT limits or work practices for those specific periods. If this is the case, such secondary limits or work practices must be justified as BACT in the permitting record and IEPA must ensure that all PSD requirements, including compliance with National Ambient Air Quality Standards and PSD increments, are met during these times.¹ Please revise the permit to ensure that the BACT emission limits or work practices are effective at all times, and do not exempt any periods of shakedown or other operational periods (e.g., start up and shutdown).

We appreciate the opportunity to provide comments on this draft PSD permit. Please feel free to contact me or have your staff contact Constantine Blathras, of my staff, at (312) 886-0671.

Sincerely,



Genevieve Damico
Chief
Air Permits Section

¹ See In re Prairie State Generating Company, 13 E.A.D. 1, 85-91(EAB 2006); In re Indeck-Niles Energy Center, 13 E.A.D 126, 170-181 (EAB 2004); In re Rockgen Energy Center, 8 E.A.D. 536, 551-555 (EAB 1999).